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CONSORTIUM CALENDAR

MARCH 1986

APRIL 1986

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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 CCUG
2	3	4 M3G EXEC LAMALUG	5 LACC	6 APPLE EXEC	7 CMARC	8 DRUG
9	10	11 TI USERS GROUP	12 HEATH SIG ACM	13 DECUS	14	15 CHAOS APPLE LUG ENERGY DEADLINE
16 CMTUG	17 St. Patrick's Day	18 M3G	19 St. Joseph's Day	20	21	22
23 Palm Sunday	24	25 UPCO (IBM PC)	26	27 CP/M SIG	28 Good Friday	29
30 Easter	31					

LANSING AREA COMPUTER CLUBS

ACM (Association for Computing Machinery)
Meets Usually 2nd Wednesday, 6:00 pm (dinner); 7:30 pm (meeting); Mother Lode Restaurant, 3411 E. Michigan, Lansing. Contact Lew Crippen 377-6636 (days) 371-3179 (evenings); Mary Dike or Walt Davis 377-6636 (days)

Apple LUG (Lansing Users Group) (MC2)
Meets Third Saturday, 9:30 A.M. 102 South Kedzie Hall, MSU, East Lansing. Contact P.O. Box 27144, Lansing, MI 48909; Gary G. Martin 394-0115 after 6pm. Executive Meetings First Thursday, 7:00 pm; Foster Community Center, 200 N Foster, Lansing

CCUG (Greater Lansing Color Computer Users Group) (MC2)
Meets First Saturday, 1:00 P.M.; East Lansing Public Library, 950 Abbott, E.L. Contact P.O. Box 14114, Lansing, MI 48901; Dale Knepper (president) 626-6917.

CHAOS (Capitol Hill Atari Owners Society) (MC2)
Meets Third Saturday 9:00 AM; Foster Community Center, 200 N. Foster, Lansing. Contact PO Box 16132, Lansing, MI 48901; Leo Sell (president) 393-7792.

CMARC (Central Michigan Amateur Radio Club)
Meets 1st Friday, 8:00 pm; American Red Cross Bldg., 1800 E. Grand River, Lansing. Contact Bill Hineman N8ALL (president) 323-2914.

Comp Klub of Lansing (TI Users Group)
Meets 2nd Tuesday, 7:00 pm; River Front Community Bldg, 501 N Cedar St, Lansing. Contact John Hayes 882-7860; Eugene Loyd 394-1494.

The Commodore Club (of St. Johns)
Meets Every Tuesday night, 7-10 pm. Contact David Smalldon 224-[illegible], evenings.

DECUS GLLUG (DEC Users Greater Lansing Local Users Group)
Meets Approximately every 2 months at a local DEC user. Contact C. M. Watson (secretary) 483-1111 (days).

DRUG (DEC Rainbow Users Group)
Meets 2nd Saturday, 11:00 am; Institute for Family & Child Study, Home Management House #2, MSU (next to Berkey) Contact Jeffrey Weihl 353-3717 (days) 349-6967 (evenings).

LACC (Lansing Area Commodore Club)
Meets First Wednesday, 7:00 PM; All Saints Episcopal Church, 800 Abbott, E.L. Contact PO Box 1065, East Lansing, MI 48823; Jae Walker (president) 351-7061.

LAMALUG (Lansing Area Mac and Lisa User Group)
Meets monthly; different day in first week; 6 pm dinner; 7 pm meeting; Bonanza, 6727 S. Cedar, Lansing. Contact Dick McCarrick (Computer Consignments), 394-4408; Charles Winters 787-5731.

M3G (Mid-Michigan Microcomputer Group) (MC2)
Meets Third Tuesday, 7:00 PM; Foster Community Center, 200 N Foster, Lansing. Contact PO Box 1302, East Lansing, MI 48823; Warren Wolfe (president) 337-7672. Executive Meetings First Tuesday, 7:30 PM; Beggar's Banquet, 218 Abbott, East Lansing.

M3G CMTUG (Central Mich. TRS-80 Users Group) SIG (MC2)
Meets Third Sunday, 4:00 pm, DeWitt Memorial Building, 206 N. Washington, DeWitt. Contact Lee Hodges 669-3258

M3G CP/M SIG (MC2)
Meets Last Thursday, 7:30 PM; Foster Community Center, 200 N. Foster, Lansing. Contact Greg Martin 484-5850 or Tim Childs 321-4072.

M3G Heath/Zenith SIG (MC2)
Meets 2nd Wednesday, 7:30 pm; All Saints Episcopal Church, 800 Abbott, E.L. Contact Tom Trana, PO Box 829, East Lansing MI 48823.

M3G Osborne SIG (MC2)
Meets Last Saturday, 1:00 pm; In a member's home: call for directions. Contact Larry Tirone 484-3921.

MSU MUG (MSU & Capitol Area Macintosh Users Group)
Meets Monthly during MSU school year. Contact John Sykes 332-6720.

U.P.C.O. (Users' Personal Computer Organization--IBM PC group) (MC2)
Meets 4th Tuesday, 7:30 PM; Agricultural Engineering Bldg., MSU. Contact Skip Osterhus 321-3425.

Clubs designated (MC2) are members of the Michigan Computer Consortium.

This listing is as accurate as the information we receive. To list an event or update information, contact Joe Werner at 337-7415 (evenings), or on the local BBSs BabbleNet or LSJ Access, or via MCI Mail (JWERNER).

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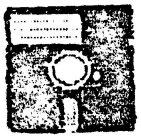

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Public Domain software can be used, given away, or modified for free. "User Supported" software can be used and copied without restriction, though the author requests a "contribution" if you like it. Thousands of these programs have been collected by computer club special interest groups for their members and anyone else interested.

MID MICHIGAN MICROCOMPUTER GROUP

M3G

ABOUT M3G

Mid-Michigan Microcomputer Group (M3G) is a non-profit organization of computer hobbyists, enthusiasts, and users in the Lansing and Mid-Michigan area. Formed in 1975, M3G is the oldest personal computer organization in the area, and one of the pioneer organizations in the country. Membership in the club is open to anyone with an interest in personal computing.

M3G is a member of the Midwest Affiliation of Computer Clubs (MACC), and the Michigan Computer Consortium (MC2).

MEETINGS

General Membership meetings are held each month, on the third Tuesday of each month at 7:30 pm, at the Foster Community Center, 200 N. Foster, Lansing. Executive Committee meetings are held on the first Thursday of each month at 7:30 pm, at Beggars Banquet restaurant in East Lansing. Visitors are welcome at all meetings.

NEWSLETTER

M3G members receive ENERGY, published by the Michigan Computer Consortium, as a benefit of membership.

SOFTWARE LIBRARY

M3G has an extensive collection of public domain software for the TRS-80, as well as the SIG/M and CPMUG collections for CP/M, and other software.

DUES

Annual dues for M3G are $12.00, for 12 consecutive months. Family memberships (two or more people at the same address, receiving only one copy of the Newsletter) are available. The Master member pays full dues; additional family members joining at the same time each pay $1.00 per year.

SPECIAL INTEREST GROUPS

M3G currently has four active Special Interest Groups: the Central Michigan TRS-80 Users Group (CMTUG) SIG, the CP/M SIG, the Heath/Zenith SIG, and the Osborne SIG. These SIGs hold additional meetings as their members desire, and may charge SIG dues in addition to M3G dues if the SIG so decides. SIG meetings are announced in the Meeting Calendar in ENERGY. Additional SIGs may be formed on any computer-related topic which M3G members may want.

EXECUTIVE COMMITTEE

President.....Warren Wolfe.....337-7672
Vice President.....Frank Dolinar.....351-1779
Secretary.....David Rovner.....337-9369
Treasurer.....Joe Werner.....337-7415

MACC Trustee.....Frank Dolinar.....351-1779
MC2 Delegate.....Joe Werner.....337-7415
CMTUG SIG Chairman.....Lee Hodges.....669-3258
CP/M SIG Chairman.....Greg Martin.....484-5850
Heath/Zenith SIG Chmn...Tom Trana.....351-8655
Osborne SIG Chairman....Larry Tirone.....484-3921

To join M3G, please fill out the following, enclose with your dues, and mail to M3G, c/o P.O. Box 1302, East Lansing, MI 48823, or come to a meeting.

NAME: _____

ADDRESS: _____

CITY, STATE: _____ ZIP: _____

PHONE: _____ (home) _____ (office)

Dues:		
	( ) M3G	$12.00
	( ) Family membership	$ 1.00
	( ) CMTUG SIG	(no additional dues)
	( ) CP/M SIG	(no additional dues)
	( ) Heath/Zenith SIG	(no additional dues)
	( ) Osborne SIG	$ 2.00
	TOTAL:	

The User
by Joe Werner

Well, it was inevitable, I suppose. We finally broke down and bought a PClone. Not that I don't still love my antique IMSAI (which will celebrate its 10th birthday later this year), but a large part of the industry is moving to follow IBM, which makes it a necessity for professionals in the field to have such equipment available.

But the software picture for the IBM compatibles is so much different than for other machines. The PC is a fully-defined architecture, with features that programs can take advantage of. And the market is so great that it is worth it for companies to spend the time developing software.

One software package that took the industry by storm a few years ago was Turbo Pascal, by Borland. Philippe Kahn simply ignored the naysayers who tried to tell him he'd never mass-market a compiler. And by selling a quality product at a very reasonable price, he sold an order of magnitude more copies than anyone had expected. Today, Turbo Pascal is a standard of the industry.

But anyone who works regularly developing software knows that often the development tools for a compiler are as important as the compiler. One tool that is too often overlooked is the cross-reference. As a developer, I have often found a cross-reference listing invaluable in spotting and/or solving problems. (A cross-reference listing is a listing of every variable, constant, and/or literal in a program, along with a reference to every line in the program where the entity is referred to.)

A local firm has produced a cross-reference utility for Turbo Pascal, and I recently had a chance to review it. The product is TurboRef™, and it is produced by Gracon Services, Inc. [4632 Okemos Road, Okemos, MI 48864, (517) 349-4900.] [I understand that TurboRef has been stocked in the past at Inacomp and Computer Consignments.] TurboRef runs on the IBM PC or clones, and requires 128 KB of memory, DOS 2.1 or later, and an IBM printer. In an unusual move, documented and commented source code (in Turbo Pascal!) is provided to all authorized users.

To quote from the introduction to the TurboRef manual: "The programmer who must modify a program or debug someone else's software is left with the hair-pulling task of tracing variables through an unfamiliar maze. There are occasions when memory alone is insufficient in accomplishing programming tasks efficiently. The TurboRef program is designed to relieve some of the tensions of the programming environment by providing the Pascal programmer with reference material."

TurboRef is a very capable cross-reference utility. It will tell you the name of each variable or the contents of each literal, along with where the entity is defined (and whether as a formal parameter, a constant, a type, a variable, or a program/procedure/function), and each line where it is referenced. If the program has "include" files, TurboRef can be set up to process the "include" files, so that you can find out each reference in each source file.

But wait! There's more. If you want, you can ask TurboRef to also list your program. TurboRef can list your program along with line numbers and the name of the source file (invaluable if you have many "include" files), and the name of each procedure. You can ask TurboRef to highlight procedures, comments, and reserved words, and you can ask TurboRef to draw boxes around each begin/end pair. This really brings the structure of the program to light, and can be a beautiful feature for spotting structural defects.

To control all of this, there are a lot of options. At first reading, the options look almost bewildering. But the documentation is reasonable and readable, and the options are well explained by an example which was included with my copy. (The example really ought to be a part of the manual, instead of extra sheets stuck inside the manual folder.)

I have not yet been able to put TurboRef to a full test. My copy of Turbo Pascal has not yet arrived, and at present I don't have a printer that is on the supported list. (Both of these will change Any Day Now.) But I have tried the program out, and have been impressed with what I have seen. I expect it to be a valuable tool in the Pascal environment.

In preparing this article, I spoke with Denise Sachau, Marketing Administrator for Gracon. She told me that a new release is in the works, which will add support for new printers, among other things. Users of the existing version who are registered will be offerred an upgrade opportunity; the details have not been defined yet. Denise also told me that TurboRef is currently able to process Microsoft Pascal and SBB (Software Building Blocks) Pascal, as well as Turbo Pascal.

Gracon Services, Inc., is a consulting service and a PC maintenance service, as well as a software house. Gracon is an example of a local company doing exciting things. All too often, these firms and their products are overlooked. Products like TurboRef, however, shouldn't be!

ON THE BOARDS
by Joe Werner

This month's article is a new updated list of (mostly) local bulletin boards. This list was obtained from the G&G Enterprises BBS, an IBM PC BBS which recently switched from RBBS software to Colossus. Thanks to the Sysops of G&G. I have made some additions and corrections.

As always, by the time a list like this makes it to print, it is likely to be out of date. There also may be an unfortunate typo or two. ALWAYS BE CAREFUL WHEN YOU CALL A NEW BBS NUMBER. If you wrote it down wrong, transcribed it wrong, or if the list you got it from had a typo, you may wind up calling a wrong number. Calling a wrong number repeatedly at odd hours can get very irritating to a human being answering the phone. Always be as careful as you can, and be sure to offer common courtesy if you do call a wrong number. And if you find a correction, please let me know.

LOCAL BULLETIN BOARD LISTING
Last Update 2/19/86

Babblenet (TBBS, fee, TRS-80)	24hours	1200,8,N,1	321-9652
Benchboard (COCO)	7p-5:30a	300,7,E,1	394-2447
Castle (Atari)			371-4232
Chaos (AMIS Atari)		300 8,N,1	371-1106
City-Lite (C-64)	24hours	300,8,N,1	694-8041
Commodore BBS of Lansing	24hours	300,7,E,1	393-1193
CompuServe	24hours	1200,7,E,1	321-2388
Computer Store FIDO (Eaton Rapids)	24hours	1200,8,N,1	663-2153
Data Basics RBBS System UP AGAIN	24hours	1200,8,N,1	337-0261
Detroit FIDO RBBS		1200,8,N,1	1-313-393-0527
East Area RBBS (Detroit)	24hours	1200,8,N,1	1-313-949-6665
Freedom Shrine (C-Net)			332-7830
Freeform RBBS (Detroit)	24hours	1200,8,N,1	1-313-774-7258
G & G Ents (RBBS, IBM-pc)	Varied!	1200,8,N,1	482-4765
Genesis II (TBBS)	24hours	1200,8,N,1	353-0803
Gorgon's Lair (RBBS)	10p-10a	300 8,N,1	349-1401
HearYea (TBBS)	24hours	300,8,N,1	882-8442
L.A.N.S. RBBS (IBM-PC) (Lansing)	24hours	1200,8,N,1	372-2719
L.A.N.S. PC-Board (Indiana)	24hours	1200,8,N,1	1-219-884-9508
Leading On (RBBS)(Swartz Creek)	24hours	1200,8,N,1	to be advised
LEARN (TBBS)	24hours	1200,8,N,1	355-3276
Les Mack's UPCO/4H RBBS	5p-7:30a	1200,8,N,1	355-6594
LSJ-ACCESS (TBBS)	24hours	1200,8,N,1	482-8144
L.U.D.S. BBS (PC-Board)	24hours	1200,8,N,1	1-750-3307
Magrathea			646-9114
MED-SIG [Jackson]	24hours	300,7,E,1	1-782-5342
MicroNet (TBBS, Fee, TRS-80) [Charlotte]			1-543-0228
MSU Library CLSI	24hours	300,7,E,1	355-3371
MSU Library RBBS	24hours	1200,8,N,1	353-7232
MSU Timesharing	24hours	300 7,E,1	353-8500
Panama (ATARI)	24hours	300,8,N,1	321-8358
Panama II (ATARI)	24hours	300,8,N,1	321-8580
PC-Exchange (Detroit)	24hours	1200,8,N,1	1-313-849-0499
Political Forum (TBBS)	24hours	1200,8,N,1	339-3783
PSYCH FORUM (TBBS)	24hours	1200,8,N,1	353-2003
RCPM (CP/M) [Lake Odessa]			1-616-693-2648
R J's Bit Bucket (FIDO)	24hours	2400,8,N,1	339-3885
The Club	24hours	1200,7,E,1	372-3131

Advanced User Documentation
by
Ginny Werner

Last month I talked a little about advanced programmer documentation. This month I will concentrate on user documentation. Again, I thank Al MacIntyre for the comments and insights he sent to me.

One of the things to remember when you are writing documentation is that there are several levels of users. Some users know a lot about computers and other users are just getting started. And there is a whole range of users who fall in between the two extremes. There can also be a set of people who never see the computer, but who will see the graphs, reports, and other things that might be generated by your software.

One way to address the problem of writing for several levels of users is to include a beginner's section and an expert section. The beginner's section gets down to the basics (how to put a diskette in the drive, what a prompt is, etc) and is labeled as something the more experienced user might just want to skim or skip. The expert's section tells the experienced user how to customize the program (where to patch the object code without source, how to modify the source code and regenerate the object, etc.). The beginner's section is usually the first section of the documenation; the expert's section is usually an appendix.

Another way to address to problem of writing for several levels of users is to include at the beginning of a section the concepts you expect the user to understand or the sections of the manual that the user should already have read. If you are not explaining the concepts in your documentation, you should give the user a list of other sources for information.

You will also need to generate at least two levels of documentation for the output your program generates. The president of the company does not need to know how a report or graph was generated, he only needs to know what it means and how to spot invalid data. People who know nothing about how the output was generated need clear and concise documentation on how to interpret the output, including how to spot invalid data. Anything more than one page usually means the output is trying to do too many things at the same time. The user who generates the document will need more information including algorithms used and how to spot invalid data.

You should also include a section in your document for the operator. This should tell the operator what is important to back up and how to recover if data is lost. It should also include things like how to audit the data (tell if it is good and what to do if it isn't), what will automatically happen at the end of month, what he should do at the end of the month, etc.

You may want to include a section specifically for managers. This section would include security concerns, limitations of the system, sample reports and how to interpret them, algorithms, staffing requirements, hardware requirements, etc.

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NOTICE TO ALL TRS80 MODEL I/III/IV/100 USERS

CMTUG, a special interest group under Mid-Michigan Microcomputer Group, has moved our meeting place and time. Our new meeting place is the DeWitt Memorial Building in DeWitt, Michigan. This is off U.S. 27 North of Lansing to Webb Rd. West on Webb to Bridge St. in downtown DeWitt, left on Washington St. 1 1/2 blocks to the Memorial building. Also our meeting time has changed to the Third Sunday of every month at 4 P.M. The first meeting at this new location and time will be March 16, 1986. Our topic for this meeting will be assembly language coding for the TRS80. If you would like more information or better directions please feel free to call me at 669-3258.

Lee A. Hodges, Chairman M3G CMTUG SIG

Heath/Zenith SIG NEWS

by Thomas Trana

One of the hardest things about writing this column is deciding what to write about. As chairman of the H/Z SIG, presumably I should cover our activities, but what, if anything, else I should write about is unclear. Our group is small, with limited activities, so I have tried to include things which might be of wider interest. However, I have no idea if I have succeeded (are there really more than six people out there who will read this? Are there even six?). I am starting to understand journalist's pleas for reader reaction that you sometimes see. Writing in a vacuum is disquieting.

At the January meeting, Rich Rabeler and myself gave an informal presentation on techniques for plant identification, and how computers can be used in the process. Bill Goodwin distributed a new public domain program that he had obtained. BRADFORD is a print utility that outputs near-letter-quality print on Epson dot-matrix printers. It was written for IBM's but it works fine (without any patching) under ZPC. It is sort of a stripped-down Fancy Font. I really like the quality of print that it puts out on the Epson, but I doubt if I will use it often, because of its limitations, the hassle of using it under ZPC, and because, like Fancy Font, it is excruciatingly slow.

Due to a conflicting engagement by the person who was to give it, there was no presentation at the Feb. meeting. Luckily, there was not really a meeting at all. Only four members showed up, so we just exchanged the latest rumors and discussed problems.

A couple of months ago I started a comparison of mail-order firms (I had placed phone orders with three firms within a half-hour period) by discussing Microprocessors Unlimited. The two other firms involved were Advanced Computer Products Inc. (POB 17329, Irvine, CA 92713) and First Capitol Computer (1106 First Capitol Drive, St. Charles, MO 63301).

I ordered an 8088 from ACP, shipped standard UPS. I received the order in about 10 days. I have ordered from ACP twice and both times the order was correct and arrived in less than weeks. That is not bad service, yet, if one firm (Microprocessors Unlimited), can seemingly consistently deliver in less than 5 days, why can't others?

First Capitol Computer has a reputation of serving the Heath/Zenith community well, but I think they were tripped up by their success and reputation when my order came in. I had ordered their RamPal-100 kit, which allows newer Z-100's previously limited to 196K of RAM to use 256K chips and get 768K RAM. At $80 (sans chips), it is a steal compared to the expense of an S-100 bus RAM board. After not hearing anything for about three weeks, I called the firm to see what was up. It wasn't too surprising to find out that that item was backordered (they were then the only source for those special chips). However, they told me, a new supply had just come in and my order was due to be shipped shortly. (Sure it was!) Well, actually, it was -- it showed up within another week. So, while their performance wasn't great, I think there were valid reasons for the delay, and I wouldn't hesitate to order from them again.

Overall, I have had good luck with DISK WORLD for disks and ribbons, after several orders. Although a couple of times the wait has been longer than predicted, due to insufficient supplies, when contacted they have always been prompt about canceling the order or offering a satisfactory substitution. They claim that they sell over one million diskettes per month, and their prices reflect it. Other places advertise lower prices in big print but when you read all of the fine print, DISK WORLD usually comes out ahead. I've used several of their printer ribbons for Epsons without any problems. Recent DW prices on M/FX-70,-80 ribbons were $2.95 each (including shipping). At my present rate of printing, I spend (at that DW price) less than $25/year for ribbons, so I don't think it is worth bothering with re-filling, re-inking, using WD-40, etc.

Another firm that prides themselves on good service is Lyben Computer Systems (1050 E. Maple Rd., Troy, MI 48083). They put out a medium-sized catalog a few times a year. They don't have an 800- phone number, but they are reasonably priced (somewhere between the deepest discount and the big, fancy mail-order firms like Inmac, NEBS, etc.). Both times I ordered from them, the order arrived in between one and two weeks.

Although I have heard lots of horror stories about mail-order merchandising, I have had pretty good service (both in computing and audio) over the past several years (camera gear, now, can be a different story!) Two points worth considering are:

1) Stick to reputable firms. This is hard to find out (which is why I've written this, though my experience with some of these firms could be just luck). Although not a certainty, longevity is one indication. If a company has been running large (=expensive) ads in one or more of the "big" magazines for at least a couple of years, it probably is not treating their customers too badly.

2) Read the fine print!!! Often this even entails a call to the firm to find out all of the conditions. For example, some of the firms that advertise low, low (succulently, mouth-wateringly low!) prices, are able to do so because they charge more for shipping and handling and/or by adding a surcharge for using a bank card. For example, one firm may charge $8 for shipping and handling, while another charges $3 for the same thing. That, plus 4% added on for using a bank card, can easily make up for their price being $20 lower than a competitor's. Mailing a cashier's or personal check may work to your advantage with a company which adds an extra fee for using a bank card, but it is so convenient to be able to call up a company, charge it, and know that it will be sent as soon as available that that may make it worth the extra money. Recently, several firms are advertising very attractive prices on hardware and software in the Atari 8-bit line. However, at least one, if you read the (very) fine print, is selling merchandise in like-new, as-is condition, without the original packaging or documentation!

Of course, buying locally is a viable option, too!

APPLE LUG NEWS

Apple LUG Officers

President: Gary G. Martin	822 W. Willoughby Rd., Lansing	394-0115
Vice-President: Jeff Howell	5120 Okemos Rd., E. Lansing	349-3831
Treasurer: Bruce McConnell	13805 Schavey Rd., DeWitt	669-8489

PROGRAM THIS MONTH

Once again it is time for the monthly meeting of the Apple L.U.G. computerists and those of us who just might want to learn something. Unfortunatly at press time there has not been a definate program arranged for announcement. Be assured though that is bound to be of interest to all as have the others in the past. If you have not seen a program that tickles your fancy please let one of the Officers know about what you would like to see at one of our meetings.

We will still be meeting at South Kedzie Hall on the M.S.U. Campus at 9:30 a.m. in room 102. The date for the meeting is March 15th.

WORD PROCESSING TUTORIAL

In January we held an Introduction to Word Processing tutorial. We would like to thank all those who attended. We would also like to thank those of you who presented it and helped with getting everything set up.

We would also like to welcome those of you who joined Apple L.U.G. at the tutorial. We hope you enjoy your association with us through the next year and years to come. We are planning more tutorials in the near future. If anyone has some ideas about one you would like to see presented please let one of the Officers know.

PORTABLE "NOTEBOOK" COMPUTERS AND THE APPLE //

By Jim DeNike

Some of you may wonder why anyone would buy a "Lap Portable" or "Notebook" computer when they already have a perfectly good Apple computer at home (or at work). I bought a Radio Shack TRS80 Model 100 to use in conjunction with my Apple //c last October, and I have been very happy with the compatability of these otherwise incompatable computers. In fact, my Model 100 has become one of my most valuable Apple //c peripherals. While the Model 100 has no build-in disk drive like the //c, the 32K RAM; (expandable to 128K) is battery backed up so that the files remain in memory after the machine has been switched off. I make use of this feature to write up rough drafts of letters, memo's, and even Applesoft BASIC programs while on breaks at work. Then, back home I transfer what I have written on the M100 to my Apple //c as a DOS 3.3 or PRODOS text file so that it can be manipulated with my favorite wordprocessing program. A side note to AppleWorks users, I have connected the M100 and the //c via the serial printer ports and using a "Custom Printer" set up as port 1 in communications mode (on my //c), I have "printed" files directly to the 100. All of the text files that are stored in the M100's memory can be transfered to the Apple, either by the use of a NULL modem adapter, or over phone lines using the Apple modem and the M100's built in modem.

I really spend a lot of time "on-line" with my computers because I serve as the Apple section system operator (Sysop) on the LSJ-ACCESS electronic bulletin board. Now I m finding that the Model 100's build in modem and telecommunications firmware provide a convienient alternative to the //c for creating menu's and text for uploading to the Apple board on LSJ-ACCESS. I store most of my downloads from other bulletin boards (text and basic) as text files on one Apple disk, I can then upload these files to the M100 for use on the M100.

Which brings up a point that you may have been wondering about: What differences exist between Applesoft and basic as it is rendered in the M100? Both are very similar, but there are differences. The M100 is programed with MicroSoft Basic, and except for a few calls to the M100's onboard hardware, it is almost identical to MicroSoft MBASIC (on an Apple // using CP/M), IBM PC BASIC, BASICA, and other versions of MicroSoft BASIC. Applesoft does not support commands such as PRINT USING, and IF THEN; ELSE. If these commands are purged and rewritten, then most MicroSoft BASIC programs can be made to run on the Apple. Running programs that were originally written in Applesoft on the M100 is less of a problem, because most of the Applesoft commands are simply a subset of MicroSoft BASIC. Programing in both versions of BASIC is more convenient on the M100 because the editing features of the M100 make it very easy to modify the source code. While the M100 itself does not support PASCAL, is possible to write the source code on the M100 (again taking advantage of the superior editing features) and then transfer it to the Apple to be compiled and executed.

So if you have an Apple at home, and an Apple or another *big* computer at work you may want to look at a "Notebook" type computer as a go between for the two to simplify data transfer, and as a sort of a portable RAM with a built-in keyboard (of course, it's much more than that).

ELECTION TIME

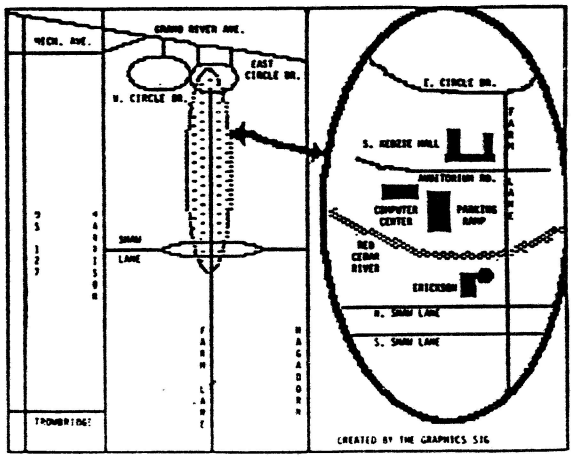
At our monthly meeting in May we will have our annual election of officers before the program begins. This year we will also be electing persons for the five positions of Directors. We will have a nominating committee set up to hold the election. In the mean time if any of you are interested in any of the positions please let one of the current Officers know.

EDUCATION S.I.G.
Chairperson: Judy Haught

The Education S.I.G. will meet on the 2nd Saturday of the month. They will meet at 9:30 a.m. at the following location:

Computer CoOp
5127 - C Aurelius Rd.
Lansing, MI 48910
(Corner of Aurelius and Jolly)
Ph: 882-3041

At the March 8th meeting we will be looking at a catalog of Educational Programs advailable. There will also be several educational disks from the Club's Library on hand to look at.



Apple Recommits to User Groups

Consumer Marketing Anoints User Group Evangelist

Apple has rekindled its relationship with its first love: User Groups.

Long known as clubs for hobbyists, User Groups now include members from each of Apple's markets: corporate and small businesses, education, and the home. Although their profile has changed, User Groups' purpose remains the same. Apple User Groups get together to exchange information and know-how about Apple products. This information exchange supports Apple's marketing plans because, research shows, knowledge about products is spread faster by word-of-mouth than by any other means of advertising.

Apple's Consumer Marketing group has recognized the support provided to Apple by its User Groups, and has made a commitment to providing ongoing support to this active and loyal portion of the installed base.

Ellen Petry Leanse has recently joined Consumer Marketing as User Group Evangelist. Leanse's background at Apple includes four years of experience in international sales support, product management, and new product development. Leanse reports to Susan Berman, Manager of Consumer Education, in this newly-created User Group support faction.

According to Leanse, "among the most promising aspects of this new function is the level of 'buy-in' demonstrated by people in all parts of the company. I think we've finally realized how important the User Group resource is to the ongoing support of Apple products. In nurturing our relationship with them, we build a system that benefits User Groups, our dealer base, Apple itself, and, ultimately, our end users."

The need for Apple to reciprocate the support provided by the User Groups was voiced during September's Apple User Group Conference. At this conference, organized and managed by Consumer Marketing's Anne Seip, participants urged Apple to initiate a User Group support program, including communication with Apple, the building of bridges between User Groups and Apple dealers, equipment loans, and the formation of an Apple User Group Advisory Council and Apple speakers' bureau. Establishing a User Group Evangelist is an important first step in implementing these programs.

Apple's objectives in supporting User Groups include increasing sales to non-owners by capitalizing on User Group's pre-sale influence and enhancing post-sale support to new and established Apple owners.

In developing User Group support, Apple aims to acheive two objectives: to capitalize on User Groups' pre-sale influence, thus increasing sales to non-owners, and enhance post-sale support to new and established Apple owners.

With nearly 600 User Groups and more than 200,000 User Group members in the U.S. alone, User Groups represent a key constituency in Apple's consumer market. Please join Consumer Marketing in welcoming Ellen Leanse and supporting her as she establishes a program to strengthen Apple's relationship with this important resource.

Dave Côté
Consumer Marketing Manager

INTERNATIONAL APPLE CORE
DOM # 47
APPLEWRITER //e UTILITIES
Tom Ostertag

(This is L.U.G. Disk #132)

Some months ago, the International Apple Core DOM consisted of a disk of utilities to be used with Applewriter II. Unfortunately, those programs did not work with the //e version of Applewriter. Tom Ostertag has remedied that problem by means of this disk, which uses the WPL (Word Processing Language) capability of Applewriter //e to facilitate the use of this popular word processor.

This disk is a well-conceived enhancement to your Applewriter //e disk (DOS 3.3 version). In the main, it adds or improves 10 functions. These are: copy multiple files, delete useless files, convert WPL files, print multiple files, print multiple copies, count free space on disk, copy the disk catalog into memory, count the words/characters in a textfile, print to screen, and print a document outline. This disk also rewrites your 'help' files and allows you to choose whether these new help files will be in 40- or 80-column mode. Other funtions will support the features of an Epson printer, and will set a STARTUP file for Applewriter //e.

Using this disk is simple. Put a copy (NOT the original) of your Applewriter //e disk in Drive 1, and this disk in Drive 2. Boot up Applewriter //e, and then enter:

CTRL-P do me.first <RETURN>

This will present you with a menu of choices. You should read through the instructions first, to learn of the enhancements which this disk offers. Then choose the "INSTALLATION" option to modify your Applewriter //e disk. You will have to cool your heels a bit- this modification process takes about 8 minutes!

When it's done, you will have an number of added or improved utilities, along with the 'help' files which explain their use. And you will be thankful that you made the modifications.

APPLE L.U.G. WELCOMES YOU!

"WHO"

Apple L.U.G. *(Lansing Users Group)* is an organization of Apple users in the mid-Michigan area. It was organized in early 1981 to provide a forum for the exchange of information and a means of helping new users to better understand and use their equipment. **Apple L.U.G.** extends a cordial welcome to anyone interested in learning more about Apple microcomputers software, hardware, etc.

"WHAT"

Our meetings are informal and consist of thirty minutes of announcements, comments, news, questions and answers, etc. This is followed by a program lasting about an hour. Program topics include demonstrations and reviews of hardware or software followed by questions and answers. Visitors are always welcome.

"WHEN"

Apple L.U.G. meetings are held at 9:30 a.m. on the third Saturday of each month.

"WHERE"

Apple L.U.G. usually meets in Room 102, South Kedzie Hall, Michigan State University, East Lansing. It is located at the northwest corner of the intersection of Farm Lane and Auditorium Road.

"WHAT ELSE"

1. Disk Library - **Apple L.U.G.** has a library of over 185 disks containing well over 2,000 public domain software programs, which are offered for sale to members at reduced rates. Disks are purchased from the International Apple Core, other Apple user groups and other organizations. The Disk Library contains a variety of useful programs for computer hobbyists, for students, for business and recreational applications.

2. Newsletter - The Apple L.U.G. News is no longer published independently, but has been incorporated into **ENERGY** magazine, which appears monthly, and contains news from the five member user groups which make up the Michigan Computer Consortium. The aim is to provide **Apple L.U.G.** members with the best possible guide to *all* computer related activities within the local area, in addition to monthly program announcements.

3. Tutorials - Experienced Apple users within the club conduct tutorials on topics of special interest to the membership. Members pay reduced rates.

4. Special Interest Groups (SIG) - Members with specialized problems or interests are encouraged to join others in SIG's (*e.g.* Communications, Education, Graphics) which meet independently of the monthly meeting.

"HOW MUCH"

Membership dues are $12 for the calendar year or $1 per month prorated. Make checks payable to **Apple L.U.G.** and mail to:

Apple L.U.G.
P. O. Box 27144
Lansing MI 48909

LANSING USERS GROUP

GREATER LANSING COLOR COMPUTER USER'S GROUP

P.O. BOX 14114 - LANSING MI 48901

>>>>>>>>>>>>>>>>>>>>>>>>>>>> Welcome <<<<<<<<<<<<<<<<<<<<<<<<<<

We are the Greater Lansing Color Computer User's Group (GLCCUG or CCUG). Devoted to the Color Computer and it's powerful Motorola MC6809E microprocessor, the group was established in 1981.

Our members share a wide range of interests. We reflect levels of knowledge from the beginner to the expert, from the programmer to the hardware hacker, from the "HAM" radio operator to the modem lovers, and from the young to the young-at-heart.

CCUG meetings are held each month at 1:00 PM in the East Lansing Public Library. The meeting date is usually the first Saturday of the month (please check schedule). Our meeting format begins with CCUG business, a feature program with speakers and/or demonstrations of software/hardware, time to talk with other members and access to the club library. Guests are welcome to attend!

Membership is $12.00 per year for adults and family, $6.00 for computerists under 18 years of age. Membership includes your personal subscription to ENERGY magazine, a voice in the club, and access to the CCUG library of Color Computer programs.

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CCUG Officiers:

President	Dale Knepper	626-6917
Vice President	Hugh Betz	323-7360
Treasurer	Craig Hahn	372-1764
Librarian	Malcolm Cleveland	485-6743
Publicist	Evonne Johnson	485-2727
Consortium Rep.	Don Warner	(313) 266-4897
Contributing Editor	John Evans	393-4098

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CCUG Schedule:

The next meetings of the Greater Lansing Color Computer User's Group will be held on March 1st and April 5th at 1:00 PM in the East Lansing Public Library.

Meeting Notes
by John Evans

February's C.C.U.G. feature program consisted of three presentations by club members. The theme was my favorite - computer communications.

Don Warner fired up his ADOS Custom BASIC V1.01 CoCo system and model HD-4040 Terminal Node Controller to show us about the Amateur (Ham) Radio bulletin board systems (BBS). Murphy's Law struck which prevented an online demostration of one of Michigan area's 4 "Ham" Radio BBSes.

Ham radio operates in the VHF radio band. The most common transmission rate is 1200 baud. Interestingly enough, Don's Terminal Node Controller has a 6809 microprocessor! The node controller allows computers to communicate over the radio much as a modem allows communications over the telephone lines. Don's radio call letters are WB8GUS.

Dave Friar (AF8D) gave the second presentation on Radio Teletype or RTTY. Dave's CoCo is modified for his interests with a large blue metal case, batteries, and other equipment I do not have notes on.

With his Clay Abrams terminal program, Dave communicates via RTTY at 45 baud or 60 words per minute. An example of a RTTY station is the 24 hour weather transmission from Ann Arbor at 147.58 MHz.

Dave also demostrated WEFAX. WEFAX is a public domain program which allows a CoCo user to view weather map facsimiles.

Next, "Rocky" Beckner (WD8SBO) demostrated his system. Rocky uses Ready-64 terminal program with his TDP-100 computer and HF modem to do "crazy things" ---as he put it. Next time you see Rocky, look at his belt buckle. His Ham radio call letters are proudly etched onto it.

Don Warner finished February's program with his CoCo capacitance meter. Built from a hardware project article in HOT CoCo's September 1983 issue, the device checks between 2 pfd to 10 mfd capacitors with two ranges at about a 5% accuracy. Not bad for $6 worth of parts!

(Notes: pfd = pico farad, mfd = micro farad - both are units of capacitance / VHF = Very High Frequency / HF = High Frequency / 1 MHz = 1 million Hertz or cycles / baud = rate of transmission including control bits.)

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Disk Directory Program(s)
by John Evans

Don't you <love> those disk directory programs in BASIC which bomb out while reading certain binary files? I have several directory programs - none of them work! So, when I typed in Dan Downard's Disk Directory program (from page 232, January 1986 issue of RAINBOW), I wasn't surprised when my CoCo declared "FC ERROR in 540".

At first, the variable LB appeared to be at fault since line 540 subtracts 1 from LB. LB was always 0 during the error. Naturally, CoCo says "0 - 1 = mission impossible".

The key was line 430. Since the program created varible LB with: LB=ASC(MID$(AA$,N*32+16,1)) in line number 430, I typed PRINT MID$(AA$,N*32+16,1)<ENTER>. Aha! The result was nothing or CHR$(0). By inserting a new line with the condition:

```
435 IF MID$(AA$,N*32+16,1)=
    CHR$(0)THEN380
```

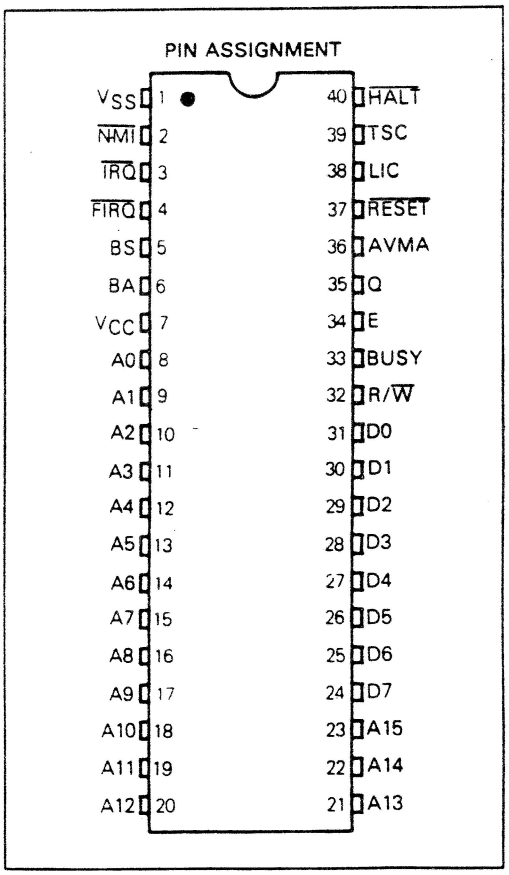
...the program jumps to a NEXT statement in line 380 with a CHR$(0) read ----- allowing the program to function correctly with previous "problem" binary files. (The programmers who read this article may have a simplier solution. I do not claim to be a good nor an efficient computer programmer.)

Dan Downard's listing suffered from THE GOLDEN RULE of typing in programs from any magazine. What is THE GOLDEN RULE? <Always wait two months> If there is a problem with a listing, magazines often provide corrections within two issues after the original listing. Apparently, RAINBOW's printer left out characters from the program as listed in the January issue. (The omitted characters are unrelated to my "fix".)

When Benchboard BBS was down due to equipment failure, I noticed the corrected listing of Mr. Downard's revised directory program on page 168 of February's RAINBOW. I thought I'd give the program a try. When the error message popped up, I decided I would fix it or throw my CoCo out the window. Lucky for me, it took longer to type this article than to find the problem and arrive at a solution.

==========

The Radio Shack Color Computer, TDP - 100, Dragon 32/64, and current Tandy Color Computer II all use Motorola's advanced MC6809E 8/16 bit microprocessor:



MC6809E

Keystrokes Unlimited Inc.
Word Processing Service
P.O. Box 23153
Lansing, MI 48909
ALISA ROSSETER
(517) 349-2410

UPCO Notes

by Skip Osterhus

Old business:

January meeting: January 28th, 1986 at 7:30 p.m.
Place: Room 116 of Ag Engineering, MSU campus
Attendance: 60
Door prize: 12 Framework II demos
Winners: Twelve individual UPCO members each won one copy of the Framework II demo diskette.
Speaker: Frank Dolinar
Topic: Framework II
DOM: Yes
EXCHANGE: No

1] Please check the mailing label on each issues of ENERGY that you receive. If your address changes and you do not notify us then you might not get your next issue of ENERGY. Keep in mind that your address label is also a reminder of you current membership status. There will be a message on the the label stating 'Renew now' one month before your membership expires and the month it does expire the message will be 'Expired'. It is important to keep your dues current in order to buy club diskettes and have full access to the bulletin board as well!

2] Please check this column for the exact date and location of the meeting each month. Although the calendar in the front of each issue is correct most of the time, this column is the final word on the subject.

3] Don't forget that the right to full access on the club bulletin board (517-355-6594) does come with current membership. The current rules are spelled out at the beginning of your session. While it may change in the future, right now if you try to download files without having an access(security) level of at least 8 you will not be successful. This can cause a problem because you access level may go down to 0. Please either read the rules and obey them or request a higher access level by leaving a message for the SYSOP to do so. Also be patient waiting for the request to be granted!

4] As always I welcome suggestions from the membership for ideas on future meetings or directions the club should be going in. Your contributions to ENERGY are welcome any time. Don't be shy. Each member has plenty to contribute. You may call me anytime at 517-321-3425 (voice) , leave a message on the club bulletin board, or discuss it with me at the monthly meetings.

New business:

February meeting: March 25th, 1986 at 7:30 p.m.
Place: Room 116 of Ag Engineering, MSU campus
Attendance: ?
Door prize: Surprise
Winner: ?
Speaker: Joe Werner
Topic: Local Area Networking (from a technical viewpoint)
DOM: Yes
EXCHANGE: Expected

1] PCjr owners interested in a PCjr SIG may contact Ray Robins at (h)517-694-1926 or (W)517-377-9383. If there is enough interest then Ray will schedule a meeting in April. Please let Ray know of your interest in the PCjr and let's get the SIG of to a good start.

2] UPCO needs a volunteer to make sure that our meeting notice gets posted in the Lansing State Journal each month. I would appreciate someone to help out with this task. You may do it through your modem if you have one. If interested please call me at home anytime at 517-321-3425 or leave a message on the UPCO board.

3] I hope that everybody likes the laser printed copy that I submitted for each issue of ENERGY. I will continue doing this and welcome comments from the membership!

4] Attention UPCO members! The April 1986 meeting of UPCO will be different than any other meeting in our history. Yes, it will still be the 4th Tuesday of the month (April 22nd, 1986) and yes it will still be at 7:30 p.m., and yes it will still be in room 116 of the Ag Eng building on the MSU campus! So what will make it so special you ask? No speakers and no presentations are planned! We will use this meeting for 1) a get to know your fellow members and topics of interest and 2) a general copying session. Please plan on attending this once a year meeting and find out all about your fellow members, and group together by topics of common interest (such as PCjr, Tandy 1000, wordprocessing, stock investing, 'C', etc.) We will also use the time to allow members to copy any or all of our free disks so be sure to bring some blank diskettes, but if you forget we will have a few to sell at the meeting. You will also be able to buy a disk of the month for this meeting and we will also provide previous DOM's for you to purchase if you desire. See you there!

Users' Personal Computer Organization

About UPCO:

UPCO was formed in early 1982 and is a non-profit organization of personal computer users in the Lansing area. Membership is open to anyone with an interest in personal computing. Most members have an IBM computer but there are also members with Tandy, Compaq, DEC, Leading Edge, DataVue, Columbia, and others.

Meetings:

UPCO meets the 4th tuesday of every month (except in December when Christmas interferes) at 7:30 p.m. in room 116 (auditorium) of the Agricultural Engineering building on the MSU campus in East Lansing. The Ag Eng building is located on the SE corner of Shaw and Farm Lane (across the street from the Planetarium). The structure of each meeting is usually:

7:30 - 7:45 Club announcements
7:45 - 9:00 Main presentations
9:00 - 9:15 Break - sign up time
9:15 - 9:20 Door prize awarded
9:20 - 9:30 Open question and answer

The times will vary according to the length of the presentations. To be eligible for a door prize you must be a paid member and in attendance.

Dues:

UPCO dues are $5.00 per person per 12 months and can be paid at the meetings or can be paid by sending a check made out to: Dick Janson
8902 Bath
Laingsburg, MI 48848

Affiliations:

UPCO is a member of the Michigan Computer Consortium, and of the the IBM Exchange organization.

Newsletter:

UPCO members receive each month a copy of ENERGY, published by the Michigan Computer Consortium, as a benefit of membership.

Bulletin board:

UPCO maintains a RBBS for its' members from 6:00 p.m. till 8:00 a.m. (all day weekends) at 517-355-6594. Mesages may be left/read and software up/downloaded.

DAM list:

UPCO keeps track of data about members thru the DAM list. When each member signs up, a form is filled out indicating the users' hardware/software combination and this info is compiled and made available to each member from time to time. Only the summation of each category is made available and not the names so as to protect each members' privacy on this matter. Members are encouraged to keep their info as accurate and current as possible. The purpose of this list is for the situation where one member would like to talk with another member about a particular piece of hardware or software. The member should contact the keeper of the DAM list and find out if another member has the hardware or software of interest. The keeper of the DAM list will arrange for the two parties to talk.

Special Interest Groups (SIGs):

UPCO currently has one SIG formed around the 'C' language. Members interested in this SIG should contact Larry Shields at 517-337-0904 after 6:00 p.m. Other SIGs could be formed around the Tandy 1000 or the IBM PCjr, etc. Anyone interested in forming a new SIG should contact the UPCO president.

Free software:

UPCO makes available many diskettes free for the copying at the meeting. Each member should bring some pre-formatted blank diskettes to the meeting to do the copying. Blank diskettes will be sold at the meeting by UPCO ($1.50/black and $2.50/other colors) for the members' convenience.

Club software library:

UPCO has a club software library of over 60 diskettes that sell for $5.00 each to members. Members can fill out an order form at each meeting requesting the particular volume desired and turn this form over to the software librarian. Members are encouraged to contribute their own public domain software and in doing so will be granted a free diskette in return. UPCO does not tollerate PIRATING software by members.

Officers:

Office	Officer	Home phone
President	Skip Osterhus	517-321-3425
Treasurer	Dick Janson	517-675-7453
Software librarian	Les Mack	517-339-8835
Secretary	Doug Pfister	517-332-6069
Keeper of the DAM list	Jerry Warren	517-321-7599

PRESIDENT'S CORNER
by Leo Sell

This month seems to be "Basic" month. In this issue we have articles about ST Basic and Basic XE and a few short programs to boot (pardon the pun). Hope you enjoy the articles and programs.

There are lots of changes underway. At the meeting in March (hopefully you will have the newsletter before then) we will be considering new bylaws and electing officers. Yes folks, its annual meeting time again. We are still working on the bylaw rewrite but here are the high points:

The main reason for the rewrite is to formalize certain policies we have been following, discard some we are not and to make a major change in the structure of our Board of Directors. The change in the Board is go to a makeup which will include a President, Vice-President, Secretary-Treasurer and two At-Large positions, an 8 bit at large representative and a 16 bit at large representative. We feel that it is important for these two constituencies to have individual representation on the Board. There are other changes which should make things run much smoother as well. The March meeting is very important. Be there, ok?

It's thank you time for some unsung heros of the club. A lot of behind the scenes work gets done by people who receive very little recognition. So I'd like to thank Sandy Theisen who works hard at labeling the newsletters for all of the Energy clubs each month. I'd also like to thank Brian Goluska, Tom Assif and Porter Payne for their contributions of newsletter articles. John Nagy not only acts as our Sysop but regularly brings equipment to the meetings. Guy Hurt not only covers bases as Program coordinator but also brings his VCR and Monitor to meetings. I know darn well I am forgetting some also. To all of you, and to all of you filling official positions and to those of you assisting in so many ways...THANKS!!!!

C.H.A.O.S. Officers and Leaders

Position	Name	Phone #
President	Leo Sell	393-7792
Vice President	Lance Ward	393-1357
Treasurer	Rob Peck	887-0327
Membership Coord.	Gary Ferris	393-2595
Library Manager	John Baker	641-4430
Public. Librarian	Richard Evans	351-2381
Record. Secretary	Sandy Theisen	882-0124
Coresp. Secretary	Dick Peterson	485-7727
Prorgram Coord.	Guy Hurt	484-7675
ST SIG Coord.	Barry Schroeder	627-6708
BBS System Op.	John Nagy	487-5646
BBS Librarian	John Baker	641-4430

Meeting Highlites

The February meeting was highlighted with a great telecommunications presentation taped and coordinated by Guy Hurt. The presentation an introduction to Plato, Compuserve and local BBS's. Any one of the subjects could have been a full demonstration by itself. So we received a little taste of a lot of them.

We also were treated to a demonstration of the Disk of the Month which included some great programs as always. Another great bunch of demos were shown which are unbelievable. The old 800 playing in stereo with the speaker, the Atari symbol whirling and bouncing. Just when you think you've seen it all, someone stretches it a little further.

Members also discussed coming changes in the bylaws, Elections coming and the need for a new meeting place or time beginning in April.

MUSINGS...
by Leo Sell

Atari announced a new entry in the ST line. Guess what!! It is actually available. The 1040 ST will come with a full Meg of memory and built-in 3 1/2 inch drive and power supply. You might also note that the 520ST and the 1040ST will now be produced with RF modulators and Composite video output.

Things seem a little dry out there in the retail world when you look for Atari?? Well it's not your imagination. Very few retailers seem to carry Atari. Now, as if to add insult to previous injury, Atari has apparently changed its return policy and will no longer accept returns from dealers and distributors. Now if you get your new Atari home and it doesn't work, Atari expects you not to return it to your dealer but to UPS it to Atari. What a bunch of Bull!!! We users must protest. Many of the few Atari dealers and distributors left are dropping the line. We lose again. I want to encouage you to write and protest.

Atari Customer Relations
PO Box 61657
Sunnyvale, CA 94088

On a more positive note, the long awaited TOS Roms are now available for the early buyers of ST's. You are supposed to get them for $25.00 suggested retail at your authorized Atari dealer or at the above address.

Til next month...Adios.

NEWSLETTER ARTICLE SUBMISSION

The preferred way to submit articles is by uploading them to the BBS or give a disk to the Editor at the meeting. Please use the following standards:
Right justified with 17 characters per inch and line length of 58 characters.

Library News

Big news from the C.H.A.O.S. library. We now have a new library commitee. Rodney Shelton, after about 8 months of hard work has resigned as Librarian. Rodney's work situation changed, requiring Saturday work. So, Rodney had to give up the Library work. Thanks for all of your hard work Rodney. In the meantime, several individuals have volunteered to assist with the library. John Baker is now Library Manager. He is being assisted in various capacities by Malcolm Cleveland, Sally Nagy and Guy Hurt. We thank all of you and we know we can expect great new things to be produced from the C.H.A.O.S. library.

Speaking of new things, we have demonstrated a Disk of the Month at both our January and February meetings. Because they have been well received we are now offering a subscription to the disks. We expect to be setup to accept orders beginning in March. The Disk of the Month subscription will cost only $50.00 per year and will include 12 monthly disks and 1 or 2 bonus disks. The subscription is designed to give C.H.A.O.S. members who are not able to make each meeting an opportunity to stay up to date on new Public Domain software. If you can't make every meeting or if you don't want to miss a single Disk of the Month (they are available only the month offered and the next) you should sign up at the March meeting or by mail. Once you are a subscriber you can either pick up your Disk of the Month at our monthly meeting or we will mail it to you afterward without additional charge. The DOM subscription is available only to members of C.H.A.O.S. and to exchange Atari Clubs. Look elsewhere in this issue of Energy for a description of previous Disks of the Month. You can sign up at the next C.H.A.O.S. meeting you attend or by mail. Watch this space for more enrollment news.

Just to remind you, the C.H.A.O.S. library offers the monthly Analog disk to its members at the same price as all of our library disks. There are always a variety of great programs on these disks. We offer them only for three meetings so don't delay if you know of one you want. Back issues can be made available, but as a rule you should plan on only the last three being available. As with any disk, you are welcome to order by mail.

We are now offering blank disks for sale at meetings strictly as a service to members attending. Cost is $1.00 per disk. There are a few disks that we will copy for free onto your media such as the Proglib disk (which lists the programs available from the library). If you come to the meeting and need blank disks, take advantage of this offer. Another service of the Capitol Hill Atari Owner's Society.

One last word. To sign up by mail for our new Disk of the Month subscription, or to mail order any disk from the C.H.A.O.S. library, mail the correct amount for your order, plus $1.00 mailing for every five disks, to:

C.H.A.O.S.
PO Box 16132
Lansing, MI 48901
Att: Library

Disk of the Month

Here is a sampling of what you have missed if you didn't get the Disks of the Month:

January:

Elevator
A great object file game where you attempt to get from the bottom to the top.

Calendar
A Basic program to help you keep track of daily appointments and schedule. One of the best personal productivity programs I have seen for the Atari.

Basicon and Basicoff
Forget to turn Basic off or on? Here are a couple of programs to do it without a reboot of the system.

Jane
Just plain neat. Different, but neat!

February:

Twocolumn.Bas
Formats a text file on your printer in two columns. Save a little paper.

Biffdrop
One of Antic's most popular games of all time. Tough one too!

Waspdos
Replaces DOS on those disks full of Object files and gives you a nice menu. Will solve some of your load problems too.

Remember, this is just a sampling. the files on these disks. They average 8 to 10 progams on each.

See Library News for an opportunity to never miss another DOM again. (And if you are real nice, maybe you can talk the librarians out of any you've missed).

```
10 REM ATARI DISK DIRECTORY FROM BASIC
15 DIM LINE$(128)
20 OPEN #1,6,0,"D:*.*":TRAP 50
30 INPUT #1,LINE$:PRINT LINE$
40 GOTO 30
50 CLOSE #1
```

Brian's Basic Benchmarks for Atari

by Brian Goluska

A benchmark is a defined amount of work that can be used to compare computers or configurations. In theory, your benchmark should represent your actual production programs. It matters little how many MIPS a machine claims, if your work hammers on the machine's slowest instruction or jams its bottleneck. It also doesn't matter if your computer seller's wiz kid can recode your benchmark program to work a lot faster. Unless the wiz is included with the system, the rest of your programs will be written in your normal code. A benchmark should measure a computer's handling of your normal work.

Whew, that's a pretty heavy introduction to a simple program. Whenever I touch a new machine that has interpreted BASIC, I time the following programs:

Program 1 Displays:

```
10 FOR I=0 TO 1000
20 ?I
30 NEXT I
40 END
```

Program 2 No Display:

```
10 FOR I=0  TO 10000
30 NEXT I
35 ?I
40 END
```

Results:

	1 Display 1000	2 No Display Ten Thousand
Atari 800	44 seconds	26 seconds
Atari 130 XE	22 seconds	23 seconds
Basic XE(on 130)	22 seconds	14 seconds
520 ST(mono)	108 seconds	10 seconds

Whoa, why doesn't the ST do this program a lot faster then the others? One reason for the slowness on the display program is the scrolling of the screen data. The ST scrolls 32K of data all the time (bit mapped graphics, good or bad), while the 800 et. al. has only 1K of screen to move in GRAPHICS 0 mode. Another reason might be mouse and other GEM overhead. To make Atari owners happy, let's add other machines to the list.

	1 Display 1000	2 No Display Ten Thousand
Atari 800	44 seconds	26 seconds
Atari 130 XE	22 seconds	23 seconds
Basic XE(on 130)	22 seconds	14 seconds
IBM PC(8088)	51 seconds	14 seconds
ATT (8086)	86 seconds	6 seconds
520 ST	108 seconds	10 seconds

In the above list, the ST is the only computer that scrolls bit mapped graphics. Like the 800, the IBM and the ATT scroll characters instead. The ST display is much like the Macintosh, and shares the same strengths and weaknesses of this method. The Amiga is also similar, except that the Amiga has extra chips to share the display work load with the 68000.

We can play with the GEM windows for a long time and learn different things about the ST. The 108 seconds for program 1 is with the default output window, about one quarter of the screen. If we shrink the window (to scroll less bits) we can run the program in about 60 seconds. If we run with a full screen window, the program takes 215 seconds (scrolling all that white space that comprises most of the screen).

What can be concluded from the above timings? I conclude that Brian's Basic Benchmark breaks down, and starts to compare apples and oranges. The original program had the advantage that it could be keyed in and run in a very short time, in a computer store or a friend's house, to get a quick feel for a machine. Let's try another program, to see what we can learn:

Program 3: ST VERSION

```
10 FULLW 2:CLEARW 2:REM FULL SCREEN EMPTY
20 FOR I=0 TO 200
30 X=640*RND(1):Y=400*RND(1)
40 LINEF 0,0,X,Y
50 NEXT I
60 ?"ALL DONE NOW"
70 END
```

ATARI 800 VERSION:

```
10 GR.8:CO.1:REM CLEAR SCREEN IN HIGHEST RES
20 FOR I=0 TO 200
30 X=319*RND(0):Y=159*RND(0)
40 PLOT 0,0:DRAWTO X,Y
50 NEXT I
60 ?"ALL DONE NOW"
70 END
```

The above program, which plots random lines from the upper left hand corner of the screen, takes 34 seconds on the 800 and 8 seconds on the ST. Now someone might argue that using the RND on each machine skews the benchmark - are we measuring BASIC or graphics or the RND statement? So change line 30 in each:

```
ST:  30 X=I:Y=400
800: 30 X=I:Y=159
```

Now the program starts filling the screen from the upper left to each dot along the bottom. This version takes 27 seconds on the 800 and 7 seconds on the ST.

And finally we begin to see the problem with benchmarks on different machines and architectures. The first program, counting to 1001 with display, runs 5 times longer on the ST, because the ST scrolls 32 times the screen memory. The second program, counting to 10001 without display, leads to no clear conclusions (although there may be "tricks" on any of the machines tested that would radically change results). The third program requires the ST to draw vectors that are much longer than the 800 vectors, and the ST is still 4 times faster, while the last program requires the 800 to fill half the pixels (rasters) on its screen and makes the ST do only an eighth of its screen - but both do 201 iterations.

Regardless of these difficulties, it is still valuable to run similar programs on different machines, and analyze the results and reasons for the results. So I won't abandon Brian's Basic Benchmarks yet. Next month the same 4 programs on the Amiga.

Still needed:
Newsletter Editor

SPEED and BASIC XE

by Tom Assiff

BASIC XE, by OSS, has been generally applauded by ATARI users and, I believe, rightfully so. Its auto-numbering, auto-indentation, renumbering, and FAST functions are definite programming aids. Since I just got my cartridge, I haven't even tried advertised features such as easy-to-use player-missile graphics, string array handling and use of the extra 64K in the 130XE. My first interest was SPEED!

BASIC XE boasts new floating point math routines which reduce execution time. From the tests I conducted it is clear that they do just that.

HHHHOOOOWWWW FAST ARE THEY?

It depends! For simple operations (+,-,*,/), factors of improvement over ATARI BASIC are about 3.6 to 1. That's significant! For complex functions (COS, SIN, etc.) the factors are even better, pushing 5 to 1.

Of course, any BASIC program is filled with grunge other than floating point operations, so you cannot expect overall speed improvements to match these figures. However, for very "mathy" routines, the lion's share of execution time can be spend in the math itself. This type of program will probably benefit the most from BASIC XE.

THE FAST FUNCTION

By the way, the fast floating point operations have nothing to do with the FAST function. FAST is a feature which smartens up BASIC's ability to decide where to go next in the case of statements like GOTO, GOSUB, and FOR-NEXT. Normally, when confronted with a statement like "GOTO 780", BASIC will stupidly start at the beginning of your program and search line by line until it encounters the line 780. Then it finally goes there.

The time it takes for one GOTO search is probably nothing you would notice-- unless you do it in a loop (just because it found statement 780 once does not make it easier to find the next time). FAST lets BASIC XE do the jump to statement 780 with addresses, without the slow search.

More important than the FAST function itself is OSS's paragraph explaining how BASIC handles transfer of control. Now that we know, we can code accordingly: either place high-volume GOSUB's at the beginning of the program where BASIC will find them quickly, or eliminate branching, altogether, when possible. Of course, BASIC XE in its FAST mode takes care of the matter, so we programmers don't have to worry about it at all.

HOW DO YOU USE THESE FEATURES?

Do I need to rewrite my basic program to gain the speed improvements? NO. Just LOAD and RUN. You automatically get the new speedy math. And you WILL notice the difference! To get the FAST function, you must do something really easy: make FAST your program's first statement. There are a number of common commands that turn off FAST (including LIST and RUN), so care should be observed.

Do I have to buy a 130XE machine to gain the speed improvements? NO. My tests show exactly the same performance for BASIC and BASIC XE on both the 800XL and the 130XE. BASIC XE will not run on the old 800's, I'm told. There are many reasons to prefer the 130XE over the 800XL, but number-crunching speed is not one of them.

In general, the improvement you can expect from the new math routines depends on how much of the program is number-crunching. The improvement you can expect from FAST will be roughly a function of how cruddy the program was coded in the first place.

So far, nothing but good news. Now the bad (not too bad): BASIC XE comes on a cartridge (still fairly good news), but it ain't all there! You also have to boot a disk called the "EXTENSION DISK" (shades of TRANSLATORs!!!). Oh, it's true, you don't HAVE to use the EXTENSION DISK, but you do, if you want any of the things you bought BASIC XE for. This includes the fast math routines and the FAST function. OSS recommends that you copy the one needed file from the EXTENSION DISK to your boot disks (a potential nuisance). There are some DOS incompatibilities, so beware.

TESTING THE BASICS

I tested ATARI BASIC against BASIC XE in three forms: BASIC XE, BASIC XE with the extension disk, and BASIC XE with the extension disk and using FAST.

I tested the different BASICs on different programs. One was a rather complex math code whose job is to create smooth free-form curves called "B-splines". Without giving a lesson in geometric modelling, I will just say that the code consists mainly of additions, subtractions, multiplications and divisions, resulting in PLOT and DRAWTO coordinates to display the curve. Very "mathy". Long before BASIC XE arrived I did my best (without losing my marbles) to eliminate unnecessary GOSUBs, etc. So the FAST function becomes less a factor in improving speed (In fact, this alone -- without BASIC XE -- improved speed by a factor of about 3 over my first clumsy version).

The second test was much simpler and to the point. The test program was:

```
5 x=0
7 intime=(peek(19)*256+peek(20))/60
10 for i=1 to 1000
20 y=x+1:z=x/y:x=y
30 next i
40 outtime=(peek(19)*256+peek(20))/60
50 time=outtime-intime
60 ?"time=";time;" seconds"
```

(note that BASIC XE lets you use lower and upper case)

The "thing" being tested is line 20.It is being run in a loop 1000 times so that its time can be measured and will not be so small that it gets lost between the ticks of ATARI's clock. The clock is being checked by "intime" and "outtime". The difference is the time it takes to run statement 20 a thousand times, plus the overhead to run the loop itself (even with no statement inside, the loop would require some small time). Also included is the time needed to compute "intime" from the two peeks (this is only done once).

To figure the time for statement 20 alone, I subtracted the "overhead" time (running the empty loop) from the time computed in line 60, then divided by 1000.

The tables below contain some of the results of the study.

Speed comparisons for BASICs

1.) RUN ON SPLINE PROGRAM

	TIME (SECONDS)	FACTOR OF IMPROVEMENT
BASIC	:49	1.00
BASIC XE	:33	1.48
BASIC XE (EXTENSIONS DISK)	:21	2.33
BASIC XE (EXTENSIONS DISK AND FAST)	:18	2.72

2.) TO EXECUTE THE LOOP CONTAINING (Y=X+1 : Z=X/Y : X=Y)

	TIME (SECONDS)	FACTOR OF IMPROVEMENT
BASIC	:21.2	1.00
BASIC XE	:15.9	1.33
BASIC XE (EXT DISK)	:06.7	3.16
BASIC XE (EXT DISK AND FAST)	:06.5	3.26

3.) TO COMPUTE (Y=X+1 : Z=X/Y : X=Y)

	TIME (SECONDS)	FACTOR OF IMPROVEMENT
BASIC	:00.0191	1.00
BASIC XE	:00.0145	1.32
BASIC XE (EXT DISK)	:00.0053	3.60
BASIC XE (EXT DISK AND FAST)	:00.0053	3.60

ATARI POWER SUPPLY

By Jim Parks

If you've ever had a power supply go bad (as mine did), then you know how long it can take to get a replacement. A few phone calls to local vendors revealed a one week wait at the minimum. Undaunted (and impatient), I decided to build my own power supply.

Undaunted (and impatient), I decided to build my own power supply...

By using the circuit diagram [See figure 1] and following the construction notes that follow, you can have a "beefy" power supply that will handle any demand the 800XL can place on it and yes, it will indeed power a RAMDISK mod. As an added feature I've included surge protection with the power supply.

The heart of this power supply is a LM323K +5 volt regulator IC. With the proper heat sink, the regulator can provide up to 3 amps to your computer. The 800XL requires less than 1.5 amps (the 130XE less than 2amps), so with a 3 amp rating this regulator is ideal for the power supply.

For connecting to your computer, you may purchase a 7 pin "DIN" connector or you may cut the cable from your old supply. If you look at the diagram [See figure 3], you'll see that pins 1,4, and 6 are the +5 volt output. Pins 3,5 and 7 are ground connections. With an Ohmmeter, find the wire that you cut that connects to pins 1,4 and 6 and tag it with "+5" for future use. The other wire is the ground and it connects to pins 3,5 and 7.

Follow the schematic [See figure 1] and wire your project carefully. Observe the polarity of the electrolytic capacitors and study the pin-out configuration of the LM323K [See figure 2] before making the connections.

Connect the Metal Oxide Varistor (as shown in the diagram) for surge protection. Connect the black and white wires of the line cord to the input of the transformer. A fuse holder should be wired to one of the inputs of the transformer. The green wire (if you are using a three wire cord) should be connected to the metal case of the transformer.

One final construction note. The LM323K must be mounted on a heat sink. I chose a plastic project case with a metal top [See Parts List] and mounted the LM323K to the metal top with heat sink compound. As an option, you can mount the regulator on a heat sink designed for a "TO-3" transistor case. I also recommend a TO-3 socket for the regulator for easy installation and removal.

Before connecting the power supply to your computer, power up your unit and check for +5 volts at the output. If all seems well then try your computer. If you notice any "ripple" on the screen, then recheck all your solder connections. It may be necessary to connect the case of the 12 volt transformer to ground. In extreme cases, you may have to shield the entire transformer with a piece of metal connected to ground.

Good luck with your project!

POWER SUPPLY PARTS LIST

T1 - 12 volt transformer (Radio Shack 273-1352 or equivalent)

BR1 - Bridge rectifier (RS 276-1146 or equiv.)

IC1 - LM323K (available at local electronics suppliers)

C1 - 2200 mfd electrolytic capacitor (RS 272-1020 or equiv.)

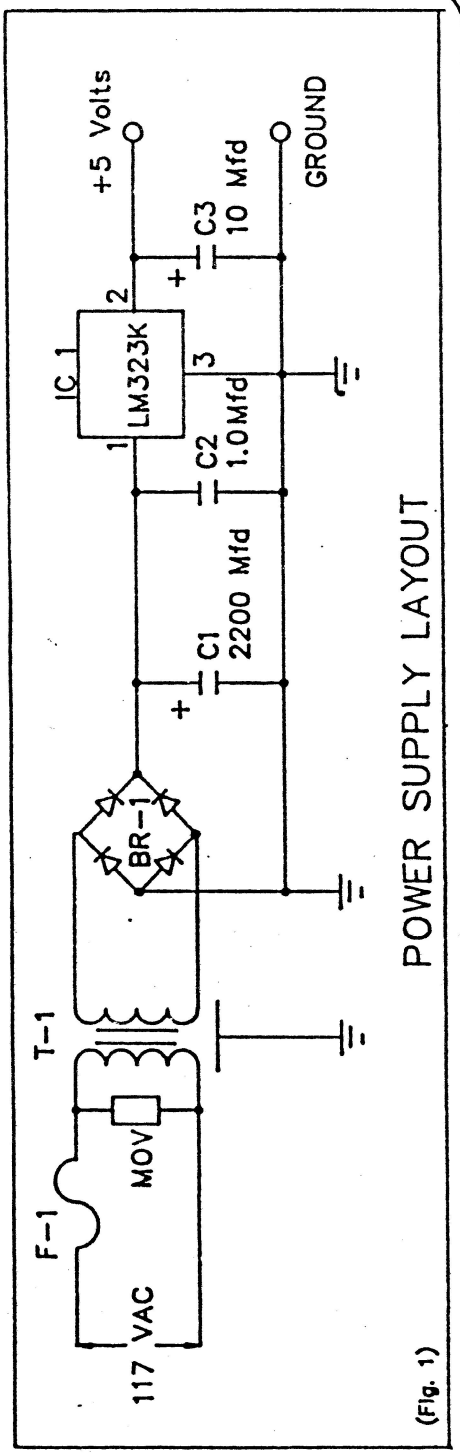
C2 - 1.0 mfd capacitor (RS 272-1055 or equiv.)

C3 - 10 mfd electrolytic capacitor (RS 272-1013 or equiv.)

MOV - Metal Oxide Varistor (RS 276-571 or equiv.)

Misc. - Project enclosure (RS 270-232 or equiv.)

Fuse holder



(Fig. 1)

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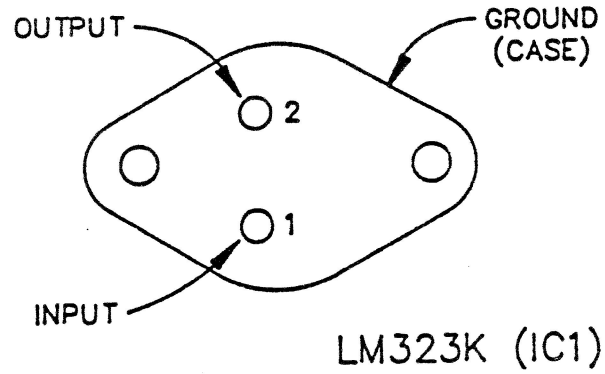
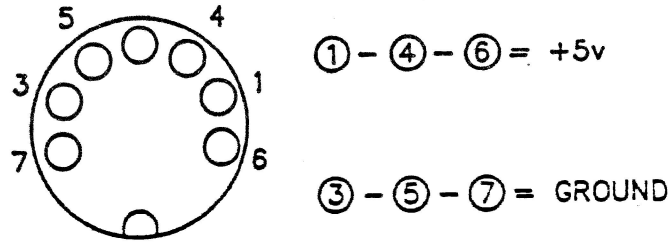


(Fig. 2)



POWER CONNECTOR PIN-OUT

(Fig. 3)

BBS BEAT

by John Nagy

It's March, and our theme this month on the CHAOS BBS is FINANCE and BUSINESS. Check us out for some nice tax, loan, and more programs and text files to help you get the most out of your ATARI.

We have an active password list of more than 275 users... that makes it hard to get on, especially since everyone wants to get on at the same time - from about 8 PM til 1 AM, the BBS is always busy- so try calling at other times. Many users have started getting up a bit earlier in the morning and calling before they go to work. Or, call as soon as you are home in the afternoon. Just remember that the popularity works FOR you too: we get some very nice uploads and discussions that simply wouldn't be there if there weren't such a crowd.

We hope that the DISK OF THE MONTH subscription program may help some of you that can't get on the system regularly. This will keep you updated on new software without the long hours needed to download (hoping your copy is good...). Details are in the Library News column.

NEXT MONTH: April is going to be NON-THEME month... look for a potpourri of goodies on the CHAOS BBS.

Our "CLUE" games have been quite a hit, with several rounds now under our belt. "CLUE" is probably the second-biggest board game ever created (after MONOPOLY) and has now even spawned a movie with three endings! Now, I have adapted the basic game for playing on call-in electronic bulletin board systems (BBS'es). It is played as a combination of a role-playing adventure and a mystery. The game is very much the same as the board game but for a few modifications to make it playable by remote callers without a board or controlled progression of moves.

C.H.A.O.S. BBS
517-371-1106

PICASSO

PICASSO is the shortest program this month; a mere three lines. It's been around for a while, but it's still good. It draws different colored lines all over the screen changing while making the whole thing glow. The effect (minus the glowing colors) resembles something a famous abstract impressionist once did. It's a pretty impressive program for it's length.

```
10 GRAPHICS 23:B=0:FOR A=1 TO 2 STEP 0
:B=B+1-16*(B=15):COLOR B:DRAWTO 159*RN
D(0),95*RND(0):SETCOLOR 0,B,4
20 SETCOLOR 1,15-B,6:SETCOLOR 2,INT(16
*RND(0)),8:IF RND(0)<0.99 THEN POKE 77
,0:NEXT A
30 FOR A=1 TO 5000:NEXT A:RUN
```

DARTS

DARTS creates an image of little darts flying their way to freedom from the chaos of the center of the screen. Or maybe just a bunch of worms getting out of a traffic jam; I'll leave the interpretation up to you. It's in graphics mode 9, the GTIA multi-brightness mode, and the darts are made up of the 15 shades available going from very bright to almost invisible at opposite ends of the dart. They're placed randomly with random directions, but the end effect is usually similar to another RUN of the program.

```
10 GRAPHICS 9:FOR A=1 TO 10000:X=INT(4
7*RND(0)+17):Y=INT(127*RND(0)+33):DX=I
NT(3*RND(0)-1):DY=2*INT(3*RND(0)-1)
20 IF DX=0 OR DY=0 THEN COLOR 0:PLOT X
,Y:FOR Z=1 TO 16:COLOR Z:X=X+DX:Y=Y+DY
:DRAWTO X,Y:NEXT Z
30 POKE 77,0:NEXT A:RUN
```

```
  333        1
 3   3      11
3     3      1
       3     1
      3      1
     3      111
    33     =======
     3        2
      3      2 2
       3       2
3      3      2
 3    3      2
  333        222
```

3M SSDD diskettes/box of 10	$22.92
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